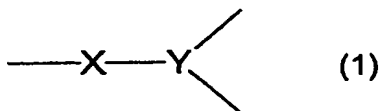


## ART 34 AMDT

## Claims

1. (amended) A dendrimer having a branching structure in which repeating units each having a branch portion are repeatedly linked, each of said repeating units having a structure represented by formula (1), and containing a linear portion X formed of an optionally substituted divalent organic group and a branch portion Y formed of an optionally substituted trivalent organic group:



characterized in that the linear portion X contains at least one thienylene moiety and is at least partially conjugated with the branch portion Y, and the repeating units are repeatedly linked through the divergent method or the convergent method.

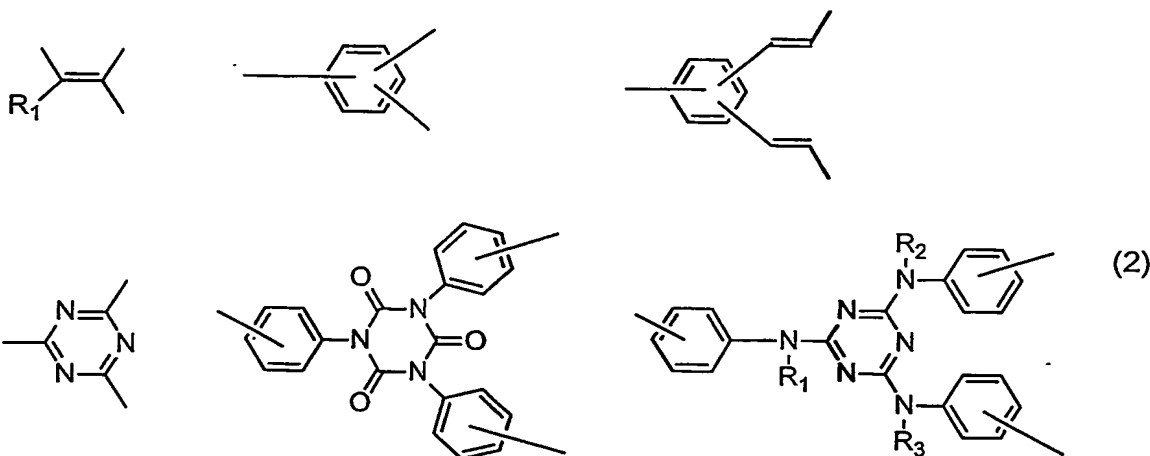
2. A dendrimer according to claim 1, wherein the portion X included in the repeating unit and serving as a starting point of the branching structure is further bonded to a center moiety serving as a core.

3. A dendrimer according to claim 2, wherein the core is a group having a valence of at least two to which at least two of the repeating unit can be directly bonded.

4. A dendrimer according to any one of claims 1 to 3, wherein the portion Y included in the repeating unit and serving as an end of the branching structure is bonded to end moieties which are different from the repeating unit.

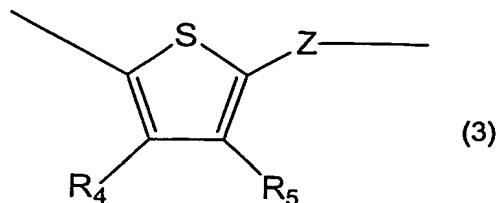
5. A dendrimer according to any one of claims 1 to 4, wherein the branch portion Y includes, as a branching center, a chemical entity selected from among chain hydrocarbons (aliphatic hydrocarbons), cyclic hydrocarbons (including alicyclic compounds and aromatic compounds), and heterocyclic compounds (including aromatic heterocyclic compounds and non-aromatic heterocyclic compounds).

6. A dendrimer according to claim 5, wherein the branch portion Y is selected from among the moieties represented by formula (2):



wherein each of R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> represents a hydrogen atom or an alkyl group.

7. A dendrimer according to any one of claims 1 to 6, wherein the linear portion X is represented by formula (3), and is at least partially conjugated with the branch portion Y:



wherein Z represents a single bond or an optionally substituted divalent organic group which is at least partially conjugated with thienylene; and each of R<sub>4</sub> and R<sub>5</sub> is selected from hydrogen, an alkyl group, and an alkoxy group.

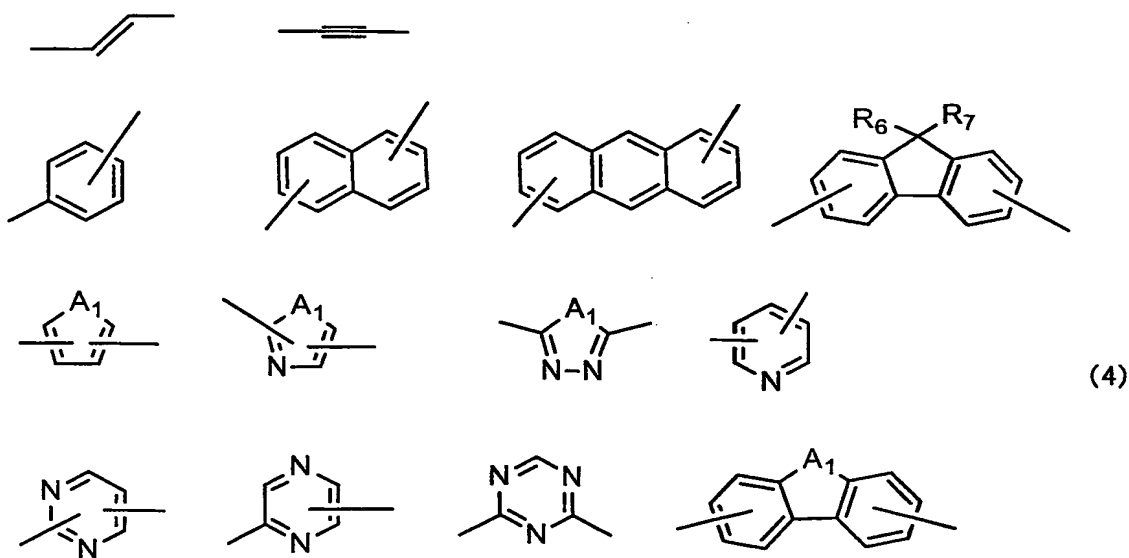
8. A dendrimer according to claim 7, wherein the substituent Z is a substituent formed from a moiety selected from the group consisting of substituted or unsubstituted chain hydrocarbon (aliphatic hydrocarbon) moieties, substituted or unsubstituted cyclic hydrocarbon (including alicyclic compound and aromatic compound) moieties, and substituted or unsubstituted heterocyclic compound (including aromatic heterocyclic compound and non-aromatic heterocyclic compound) moieties; a substituent formed from a plurality of same moieties continuously linked together selected from said group; or a substituent formed from a plurality of different moieties continuously linked together selected from said group.

9. A dendrimer according to claim 8, wherein the substituent Z is a substituent formed from a moiety selected from the group consisting of substituted or unsubstituted unsaturated aliphatic hydrocarbon moieties and substituted or unsubstituted cyclic or heterocyclic aromatic compound

moieties; a substituent formed from a plurality of same moieties continuously linked together selected from said group; or a substituent formed from a plurality of different moieties continuously linked together selected from said

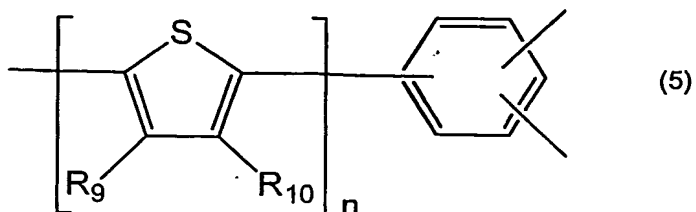
5 group.

10 10. A dendrimer according to claim 9, wherein the substituent Z is a substituent formed from a moiety selected from the group represented by formula (4); a substituent formed from a plurality of same moieties continuously linked together selected from said group; or a substituent formed from a plurality of different moieties continuously linked together selected from said group:



wherein A<sub>1</sub> represents O, S, or N-R<sub>8</sub>, and each of R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> represents a hydrogen atom or an alkyl group.

15 11. A dendrimer according to any one of claims 1 to 6, wherein the repeating unit is represented by formula (5):



wherein each of  $R_9$  and  $R_{10}$  is selected from hydrogen, an alkyl group, and an alkoxy group, and  $n$  represents an integer of 1 to 10.

12. An electronic device element characterized by  
5 employing a dendrimer as recited in any one claims 1 to 11.

13. An electronic device element according to claim 12,  
which is a charge-transporting device element.

14. An electronic device element according to claim 12,  
which is a switching transistor element.

10 15. An electronic device element according to claim 12,  
which is a light-emitting device element.

16. An electronic device element according to claim 12,  
which is a photoelectric conversion device element.